# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

#### LAKE TROPHIC DATA

## MORPHOMETRIC:

Lake: TROUT POND	Lake Area (ha):	5.62
Town: DORCHESTER	Maximum depth (m):	2.1
County: Grafton	Mean depth (m):	1.1
River Basin: Merrimack	Volume (m³):	59000
Latitude: 43°48'07" N	Relative depth:	0.8
Longitude: 71°59'39" W	Shore configuration:	1.01
Elevation (ft): 1635	Areal water load (m/yr):	11.34
Shore length (m): 850	Flushing rate $(yr^{-1})$ :	10.80
Watershed area (ha): 90.1	P retention coeff.:	0.54
<pre>% watershed ponded: 0.0</pre>	Lake type:	natural

BIOLOGICAL:	11 February 1997	19 August 1996
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 75%	RHIZOSOLENIA 45%
#2	(ALL ALGAE SPARSE)	CHRYSOSPHAERELLA 20%
#3		DINOBRYON 17%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		9.44
DOM. ZOOPLANKTON (% TOTAL) #1	ROTIFER SPP 71%	KERATELLA 88%
#2		NAUPLIUS LARVA 5%
#3		POLYARTHRA 5%
ROTIFERS/LITER	94	6282
MICROCRUSTACEA/LITER	38	375
ZOOPLANKTON ABUNDANCE (#/L)	132	6697
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		1.7
BOTTOM DISSOLVED OXYGEN (mg/L)	7.3	7.8
BACTERIA (E. coli, #/100 ml) #1		< 1
#2		
#3		

#### SUMMER THERMAL STRATIFICATION:

#### not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:	Lake: TROUT POND Town: DORCHESTER				
	11 Febru	lary 1997	19 1	August 199	96
DEPTH (m)	1.0		1.0		1.8
pH (units)	5.5		6.4		6.0
A.N.C. (Alkalinity)	2.9		2.4		2.3
NITRATE NITROGEN	0.14		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.21		0.39		0.44
TOTAL PHOSPHORUS	0.007		0.013		0.016
CONDUCTIVITY (µmhos/cm)	23.6		17.4		17.9
APPARENT COLOR (cpu)	24		45		45
MAGNESIUM			0.26		
CALCIUM			1.7		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 2		< 2		< 2
SULFATE	4		3		3
TN : TP	50		30		28
CALCITE SATURATION INDEX	¥ 1		4.3		

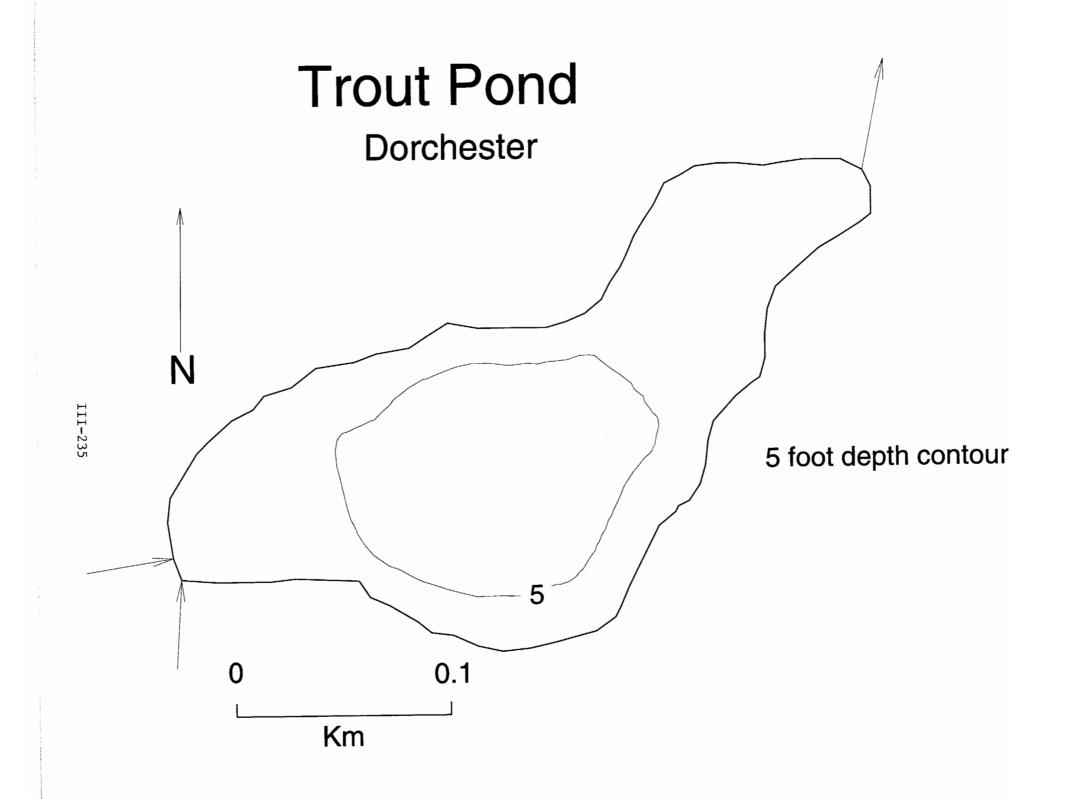
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.0	).	S.D.	PLANT	CHL	TOTAL	CLASS
,	**	4	2	2	8	Meso.

#### COMMENTS:

- 1. This is a remote pond located along a 4-wheel drive jeep trail that was sampled jointly with the NH Fish and Game Department.
- 2. This is a small, shallow, mildly acidic, lightly tea-colored mesotrophic pond. Macrophytes and algae were common, and water clarity was less than six feet. Secondary productivity was very prolific with high numbers of the rotifer *Keratella*. Rotifer (6282 cells/L) and total zooplankton (6697 cells/L) counts were the highest of any lake in our database.



#### FIELD DATA SHEET

LAKE: TROUT POND DATE: 08/19/96

TOWN: DORCHESTER WEATHER: SUNNY, BREEZY, RIPPLES

	DEPTH	ТЕМР	*DISSOLVED	OXYGEN
	(M)	(°C)	OXYGEN	SATURATION
	0.1	22.0	8.4	95 %
	0.5	22.0	8.2	93 %
	1.0	21.6	8.2	92 %
	1.5	21.4	7.6	84 %
	2.0	21.2	7.8	86 %
1				
	1000			

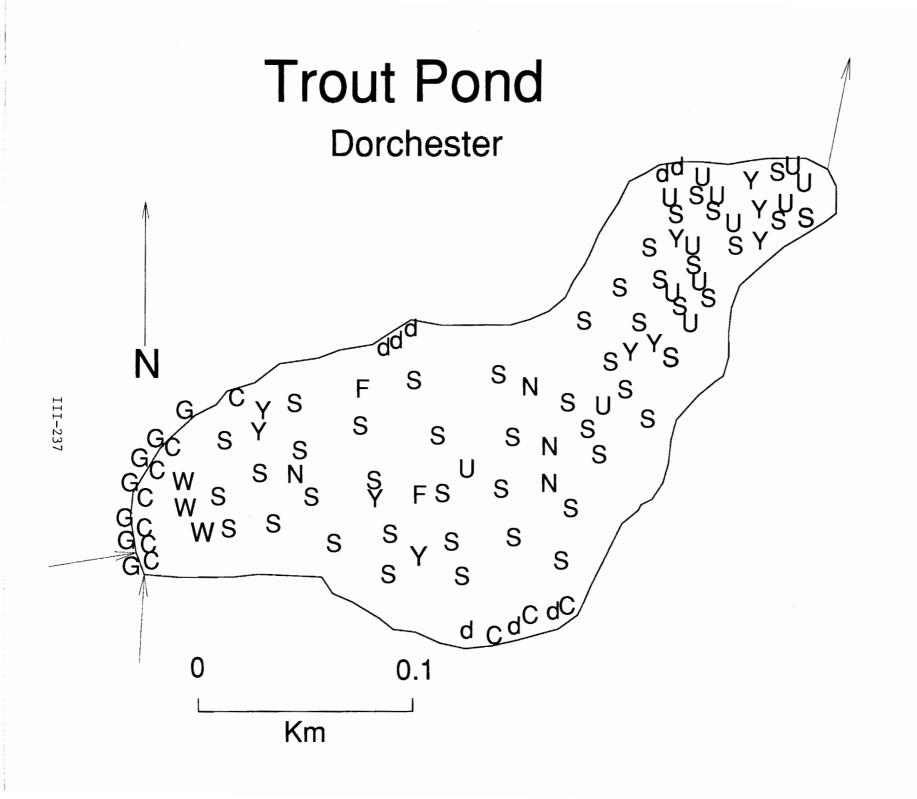
SECCHI DISK (m): 1.7

COMMENTS:

BOTTOM DEPTH (m): 2.0

TIME: 1010

\*Dissolved oxygen values are in mg/L



### AQUATIC PLANT SURVEY LAKE: TROUT POND TOWN: DORCHESTER DATE: 08/19/96 PLANT NAME Key ABUNDANCE **GENERIC** COMMON S Bur reed Sparganium Scat/Common U Utricularia Bladderwort Scattered Y Yellow water lily Sparse Nuphar N Nymphaea White water lily Sparse С Scattered Carex Sedge d Dulichium arundinaceum Three-way sedge Scattered $\mathbf{F}$ Nymphoides cordatum Floating heart Sparse W Pondweed Potamogeton Sparse G Gramineae Grass family Sparse

OVERALL ABUNDANCE: Scat/Common

### **GENERAL OBSERVATIONS:**

Plants were located throughout this shallow pond.